

Comparisons of Job Characteristics

Focus Occupation: [Architectural and Engineering Managers \(11-9041\)](#)

Associated Occupation: [Civil Engineering Technicians \(17-3022\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 78

Focus Occupation: Architectural and Engineering Managers (11-9041)

Associated Occupation: Civil Engineering Technicians (17-3022)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Engineering and Technology	5.7	15.6	23.2	>> Current knowledge level is likely more than sufficient
Building and Construction	4.0	15.1	10.7	<< Extensive education and/or training may be required
Mathematics	9.2	15.0	17.4	> Current knowledge level is likely sufficient
Design	5.2	14.1	19.0	>> Current knowledge level is likely more than sufficient
Public Safety and Security	6.9	10.6	10.0	0 Current knowledge level may be sufficient
Geography	3.9	9.0	5.7	<< Extensive education and/or training may be required
Transportation	4.6	8.6	5.3	<< Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 83

Focus Occupation: Architectural and Engineering Managers (11-9041)

Associated Occupation: Civil Engineering Technicians (17-3022)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation
Reading Comprehension	10.7	12.9	14.8	> Skill level is likely sufficient
Mathematics	6.2	8.7	11.7	>> Skill level is likely more than sufficient
Operations Analysis	5.0	7.9	13.9	>> Skill level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 95			
Focus Occupation: Architectural and Engineering Managers (11-9041) Associated Occupation: Civil Engineering Technicians (17-3022)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Oral Comprehension	12.5	12.8	15.0	>	Current ability level is likely sufficient
Near Vision	11.1	12.6	12.5	0	Current ability level may be sufficient
Oral Expression	12.4	12.2	15.0	>	Current ability level is likely sufficient
Deductive Reasoning	10.6	11.4	13.9	>	Current ability level is likely sufficient
Visualization	7.5	11.4	10.1	<	Some improvement in abilities may be required
Written Comprehension	11.0	11.4	15.2	>>	Current ability level is likely more than sufficient
Written Expression	9.8	11.4	13.8	>	Current ability level is likely sufficient
Problem Sensitivity	11.1	10.8	13.9	>>	Current ability level is likely more than sufficient
Mathematical Reasoning	6.3	10.3	13.3	>>	Current ability level is likely more than sufficient
Number Facility	6.3	9.2	11.2	>	Current ability level is likely sufficient
Memorization	5.6	6.9	5.0	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 76
Focus Occupation: Architectural and Engineering Managers (11-9041) Associated Occupation: Civil Engineering Technicians (17-3022)		
Work Activities	Exclusivity of Activity	
Communicate technical information	4	
Conduct land surveys	81	
Confer with engineering, technical or manufacturing personnel	25	
Estimate cost for engineering projects	69	
Estimate time needed for project	64	
Evaluate costs of engineering projects	70	
Evaluate engineering data	60	
Prepare technical reports or related documentation	22	
Read blueprints	10	
Read technical drawings	7	

Resolve engineering or science problems	46
Understand engineering data or reports	48
Understand technical operating, service or repair manuals	6
Use scientific research methodology	21
Use technical regulations for engineering problems	61

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 54

Focus Occupation: Architectural and Engineering Managers (11-9041)
Associated Occupation: Civil Engineering Technicians (17-3022)

Tools and Technologies	Exclusivity
Computer data input devices	2
Computers	1
Content authoring and editing software	1
Electrochemical measuring instruments and accessories	9
General laboratory glassware and plasticware and supplies	13
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Laboratory heating and drying equipment	13
Network applications software	1
Safety apparel	4
Temperature and heat measuring instruments	6
Vision protection and accessories	3

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.